Outgoing
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OGMCOAL - Crandall Treatment Sludge Analysis

From: Kevin Lundmark
To: Dana Marrelli
Date: 4/7/2010 10:07 AM
Subject: Crandall Treatment Sludge Analysis
CC: Dave Shaver; OGMCOAL; Steve Christensen

Dana,

I've included an excerpt from the Utah Hazardous Waste Rules (R315) where the toxicity characteristic and associated testing are described. I've also included an excerpt from the RCRA regulations showing the 8 metals and their regulatory levels (40 CFR 261.24 Table 1). These are the 8 metals that the sludge needs to be analyzed for using the TCLP procedure. The sludge also should be analyzed for total solids, as this is a routine and important analysis for evaluating treatment system performance. As I mentioned on the phone, you may choose to analyze the sludge for total metals (i.e., sample preparation using EPA 3000-series instead of 1311), but that decision is up to you and your laboratory.

Kevin

http://www.hazardouswaste.utah.gov/Rules/HazardousWasteRule.htm

R315-2-9. Characteristics of Hazardous Waste

(g) TOXICITY CHARACTERISTIC
(1) A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, see R315-1-2, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 of 40 CFR 261.24 at a concentration equal to or greater than the respective value given in that Table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purposes of this paragraph.

(2) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table 1 of 40 CFR 261.24, which corresponds to the toxic contaminant causing it to be hazardous. Table 1 of 40 CFR 261.24, 1990 ed., is adopted and incorporated by reference.

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;rgn=div5;view=text;node=40%3A25.0.1.1.2;idno=40;sid=a1da90a5902215f4c2d84f84656cf991;cc=ecfr

Table 1 –Maximum Concentration of Contaminants for the Toxicity Characteristic

EPA HW No.[1]	Contaminant	CAS No.[2]	Regulatory Level (mg/L)
D004	Arsenic	7440–38–2	5
D005	Barium	7440–39–3	100
D006	Cadmium	7440–43–9	1
D007	Chromium	7440–47–3	5
D008	Lead	7439–92–1	5
D009	Mercury	7439–97–6	0.2
D010	Selenium	7782–49–2	1
D011	Silver	7440–22–4	5

[1]Hazardous waste number.

[2]Chemical abstracts service number.